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Economic and Fiscal Impacts of New House Bill 2313 Transportation Funding for the Department of Rail and Public Transportation for FY 2014-FY 2018

Prepared for Office of the Secretary of Transportation
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1. Executive Summary

As a result of the 2013 legislative session, the Commonwealth of Virginia will have approximately $6.5 billion in additional transportation revenues over the next six years. Of this amount, $2.7 billion is for Virginia Department of Transportation (VDOT), $0.7 billion for Department of Rail and Public Transportation (DRPT), and $3.1 billion for the Hampton Roads and Northern Virginia regions.[1] This report focuses on the HB 2313 funding for DRPT only, and does not include funding for VDOT and the regions of Hampton Roads and Northern Virginia.[2]

The proposed DRPT funding covers a variety of projects across the Commonwealth of Virginia.

The total $764.7 million investment will be spent on a variety of projects, such as acquisition of rolling stock and supporting the operation of intercity passenger rail service. The DRPT funding plan covers projects from fiscal year (FY) 2014 through FY 2018.

The five-year cumulative economic impact of the DRPT funding can reach $1.4 billion that annually supports 2,925 jobs in the state from FY 2014 through FY 2018.

Of the $1.4 billion in total impact, $683.1 million is the estimated direct construction and operational spending while $739.7 million represents the ripple effects. On an annual average basis, the economic impact is $284.5 million that can support 2,925 jobs per year in Virginia from FY 2014 through FY 2018.

Construction spending from this transportation investment can bring Virginia's state government a five-year total of $16.4 million in tax revenue while fiscal benefits for local governments can total $0.3 million from FY 2014 through FY 2018.

Local government revenue from the transportation investment is due to business, professional, and occupational license (BPOL) taxes. State government revenue is due to individual and corporate income taxes.

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[1] At the time of the publication of this report, Northern Virginia had not yet finalized a specific project plan for the new regional funding provided by House Bill (HB) 2313, The new funding for the Northern Virginia region can be used for both highway and public transit projects. All new HB 2313 funding for Northern Virginia is included in the economic impact study for VDOT.

[2] The economic impact of the VDOT portion of the funding can be found in Economic and Fiscal Impacts of New House Bill 2313 Transportation Funding for Virginia Department of Transportation for FY 2014-FY 2019, by Chmura Economics & Analytics, May 13, 2013.

2. Background

As a result of the 2013 legislative session, the Commonwealth of Virginia will have approximately $6.5 billion in additional transportation revenues over the next six years. Of this amount, $2.7 billion is for VDOT, $0.7 billion for DRPT, and $3.1 billion for the Hampton Roads and Northern Virginia regions. To understand the economic impact of construction and operation spending from HB 2313 funding for DRPT on the Commonwealth and its nine transportation districts, Chmura was retained to conduct such an economic and fiscal impact study.

The economic impact of construction and operation spending by DRPT is analyzed in the following three categories: direct, indirect, and induced.[3] Direct impact measures the actual dollar amount spent on rail and transit operation and capital projects. Indirect and induced impacts measure the secondary benefits of DRPT spending for regional businesses. Using railroad construction as an example, indirect effects are attributed to state and regional industries supporting construction activities, such as site development and truck transportation. Induced effects occur when individuals hired by the construction firms spend their income at regional businesses (such as retail venues or medical offices), thus injecting more money into the regional economy.

The indirect and induced effects are estimated with IMPLAN Pro[4] software after the direct impact is estimated. IMPLAN Pro is an economic impact assessment modeling system that allows the user to build economic models to estimate the impact of economic changes in states, counties, and communities. It is one of the most widely-used economic impact software packages, is updated annually, and is customized by individual localities—thus providing a realistic picture of local economies.

[3] Appendix 2 of this study provides a glossary including these terms.
[4] IMPLAN Pro is one of two major software packages used by economists to evaluate the economic effects of an economic event.

3. Economic Impact of DRPT Funding

3.1. Economic Impact in Virginia

DRPT plans to spend $764.7 million from FY 2014 through FY 2018 to provide both rail and public transit services.[5] This fund will be used to acquire rolling stock for investment benefits, to support the operation of intercity passenger rail service, and for the improvement of existing infrastructure. This transportation plan covers a variety of projects across the Commonwealth of Virginia. Among the nine regions, Northern Virginia is scheduled to receive the largest amount of investment at $391.6 million, followed by Richmond at $146.6 million. Statewide projects will compose the third-largest share of the fund at $63.4 million.

Table 1 presents the estimated economic impact of operation and capital spending related to the DRPT investment. The direct spending amount in Virginia is estimated to be $683.1 million.[6] From FY 2014 through FY 2018, it is estimated that operation and capital spending from the DRPT investment will generate a total economic impact (including direct, indirect, and induced impacts) of $1.4 billion in Virginia, supporting a total of 14,625 cumulative jobs (or 2,925 per year). Also included in this impact are 9,038 direct jobs from FY 2014 through FY 2018 (or 1,808 per year). The indirect impact in Virginia will total $294.8 million and support 1,967 cumulative jobs (or 393 per year) in industries catering to rail and transit operation and construction. The induced impact is expected to total $444.9 million with 3,620 cumulative jobs (or 724 per year) in the state during the 5-year period—jobs concentrated in consumer service-related industries such as restaurants, hospitals, and retail stores. From FY 2014 through FY 2018, the annual average economic impact of construction spending from DRPT transportation investment is $284.5 million that can support 2,925 jobs in Virginia.

Table 1: Economic Impact of DRPT Funding in Virginia

		Direct	Indirect	Induced	Total
5-Year Total (FY 2014-2018)	Spending ($Million)	$683.1	$294.8	$444.9	$1,422.7
	Employment	9,038	1,967	3,620	14,625
Annual Average (FY 2014-2018)	Spending ($Million)	$136.6	$59.0	$89.0	$284.5
	Employment	1,808	393	724	2,925

Note: Numbers may not sum due to rounding
Source: Chmura Economics & Analytics and IMPLAN 2010

3.2. Economic Impact in VDOT Districts

Table 2 provides the total economic impact of DRPT spending in each of the nine VDOT districts. Among all nine districts, the Northern Virginia district is scheduled to receive the largest amount of transportation

[5] This figure includes transit funding under the Market Equity Act. If this law is not passed by Congress, the total funding will be reduced to $641.1 million from FY2014 through FY2018.
[6] This number is smaller than the total $764.7 million as it excludes spending outside Virginia. For example, a large amount of spending will be to purchase railway rolling stock and locomotives, where only a small portion of that will be spent in Virginia. Chmura uses the IMPLAN Model to estimate the percentage of DRPT funding that will be spent in Virginia.

funding. Consequently, the economic impact is the largest in this district. For example, in Northern Virginia, an estimated $330.3 million of direct DRPT funding spent in the district can generate $646.5 million in total economic impact from FY 2014 through FY 2018. These spending activities can support 6,842 cumulative jobs (1,368 jobs per year) in the Northern Virginia district from FY 2014 through FY 2018.

Table 2: Economic Impact of DRPT Transportation Funding on Virginia Districts
Cumulative Impact (FY 2014-2018)

		Direct	Indirect	Induced	Total	Annual Average Total Impact (FY 2014-2018)
Bristol	Spending ($Million)	$3.1	$0.9	$1.5	$5.5	$1.1
	Employment	63	8	14	86	17
Salem	Spending ($Million)	$49.7	$15.1	$16.4	$81.1	$16.2
	Employment	514	136	155	805	161
Lynchburg	Spending ($Million)	$44.9	$12.0	$11.1	$68.0	$13.6
	Employment	459	100	105	664	133
Richmond	Spending ($Million)	$134.1	$49.4	$72.2	$255.6	$51.1
	Employment	1,290	362	603	2,254	451
Hampton Roads	Spending ($Million)	$44.7	$17.2	$31.0	$92.8	$18.6
	Employment	799	113	269	1,182	236
Fredericksburg	Spending ($Million)	$4.0	$1.3	$1.7	$7.1	$1.4
	Employment	67	12	16	95	19
Culpeper	Spending ($Million)	$7.0	$2.1	$4.2	$13.4	$2.7
	Employment	123	20	37	180	36
Staunton	Spending ($Million)	$4.3	$1.3	$2.0	$7.6	$1.5
	Employment	81	11	18	111	22
Northern Virginia	Spending ($Million)	$330.3	$119.4	$196.8	$646.5	$129.3
	Employment	4,709	716	1,417	6,842	1,368
Virginia	Spending ($Million)	$683.1	$294.8	$444.9	$1,422.7	$284.5
	Employment	9,038	1,967	3,620	14,625	2,925

Notes: Numbers may not sum due to rounding

The sum of the district impacts is smaller than Virginia impact, as the statewide impact is not included in any of the district impacts.

Source: Chmura Economics & Analytics and IMPLAN 2010

4. Fiscal Impact

The operation and capital spending of DRPT funding can also generate tax revenues for both the state and local governments from FY 2014 through FY 2018. The business, professional, and occupational license (BPOL) tax is collected for local governments based on capital spending, and individual and corporate income tax is collected for the state government. Chmura used the average BPOL tax rates of all local governments in a district for estimating BPOL tax revenue. The total BPOL tax revenue is estimated to be $0.3 million from FY 2014 through FY 2018—the sum of BPOL taxes in all local governments in Virginia.

Table 3: State and Local Fiscal Impact (Cumulative FY 2014-18, $Million)

	Local BPOL Tax	Individual Income Tax	Corporate Income Tax
Bristol	0.0	0.1	0.0
Salem	0.0	0.6	0.2
Lynchburg	0.0	0.5	0.2
Richmond	0.1	2.1	0.5
Hampton Roads	0.0	1.3	0.0
Fredericksburg	0.0	0.1	0.0
Culpeper	0.0	0.2	0.0
Staunton	0.0	0.1	0.0
Northern Virginia	0.1	8.9	0.4
Virginia	**$0.3**	**$14.5**	**$1.9**

Note: The sum of the district amounts is smaller than the Virginia amounts, as the fiscal impact from statewide projects is not included in any of the district impacts.
Source: Chmura Economics & Analytics

For the Virginia state government, revenue originates from individual and corporate income taxes as a result of new employment and profits from DRPT operation and construction spending. The total individual income tax revenue is estimated to be $14.5 million from FY 2014 through FY 2018, while the corporate income tax revenue for this period is estimated to be $1.9 million.

Appendix 1: VDOT District Definitions

VDOT District Definitions

	District	Localities				
1	Bristol	Bland	Buchanan	Dickenson	Grayson	Lee
		Russell	Scott	Smyth	Tazewell	Washington
		Bristol	Norton	Wise	Wythe	
2	Salem	Bedford Co.	Botetourt	Carroll	Craig	Floyd
		Franklin	Giles	Henry	Montgomery	Patrick
		Bedford City	Galax	Martinsville	Radford	Roanoke City
		Pulaski	Roanoke Co.	Salem		
3	Lynchburg	Amherst	Appomattox	Buckingham	Campbell	Charlotte
		Cumberland	Halifax	Nelson	Pittsylvania	Prince Edward
		Danville	Lynchburg			
4	Richmond	Amelia	Brunswick	Charles City	Chesterfield	Dinwiddie
		Goochland	Hanover	Henrico	Lunenburg	Mecklenburg
		New Kent	Nottoway	Powhatan	Prince George	Richmond City
		Colonial Heights	Hopewell	Petersburg		
5	Hampton Roads	Accomack	James City	Northampton	Southampton	Surry
		Sussex	York	Greensville	Norfolk	Poquoson
		Chesapeake	Emporia	Franklin	Hampton	Newport News
		Portsmouth	Suffolk	VA Beach	Williamsburg	Isle of Wight
6	Fredericksburg	Caroline	Essex	Gloucester	King and Queen	King George
		King William	Lancaster	Mathews	Middlesex	Northumberland
		Fredericksburg	Richmond Co.	Spotsylvania	Stafford	Westmoreland
7	Culpeper	Albemarle	Culpeper	Fauquier	Fluvanna	Greene
		Louisa	Madison	Orange	Rappahannock	Charlottesville
8	Staunton	Alleghany	Augusta	Bath	Clarke	Frederick
		Highland	Page	Rockbridge	Rockingham	Shenandoah
		Buena Vista	Covington	Harrisonburg	Lexington	Staunton
		Warren	Waynesboro	Winchester		
9	Northern Virginia	Arlington	Fairfax Co.	Loudoun	Prince William	Manassas Park
		Alexandria	Fairfax City	Falls Church	Manassas	

Source: Virginia Department of Transportation

Appendix 2: Impact Study Glossary

The following is a list of key terminologies frequently used in economic impact analyses.

Input-Out Analysis—an examination of business-business and business-consumer economic relationships capturing all monetary transactions in a given period, allowing one to calculate the effects of a change in an economic activity on the entire economy (impact analysis).

Direct Impact—economic activity generated by a project or operation. For construction, this represents activity of the contractor; for operations, this represents activity by tenants of the property.

Overhead—construction inputs not provided by the contractor.

Indirect Impact—secondary economic activity that is generated by a project or operation. An example might be a new office building generating demand for parking garages.

Induced (Household) Impact—economic activity generated by household income resulting from direct and indirect impacts.

Ripple Impact— the indirect and induced impacts combined are called ripple impact

Multiplier—the cumulative impacts of a unit change in economic activity on the entire economy.